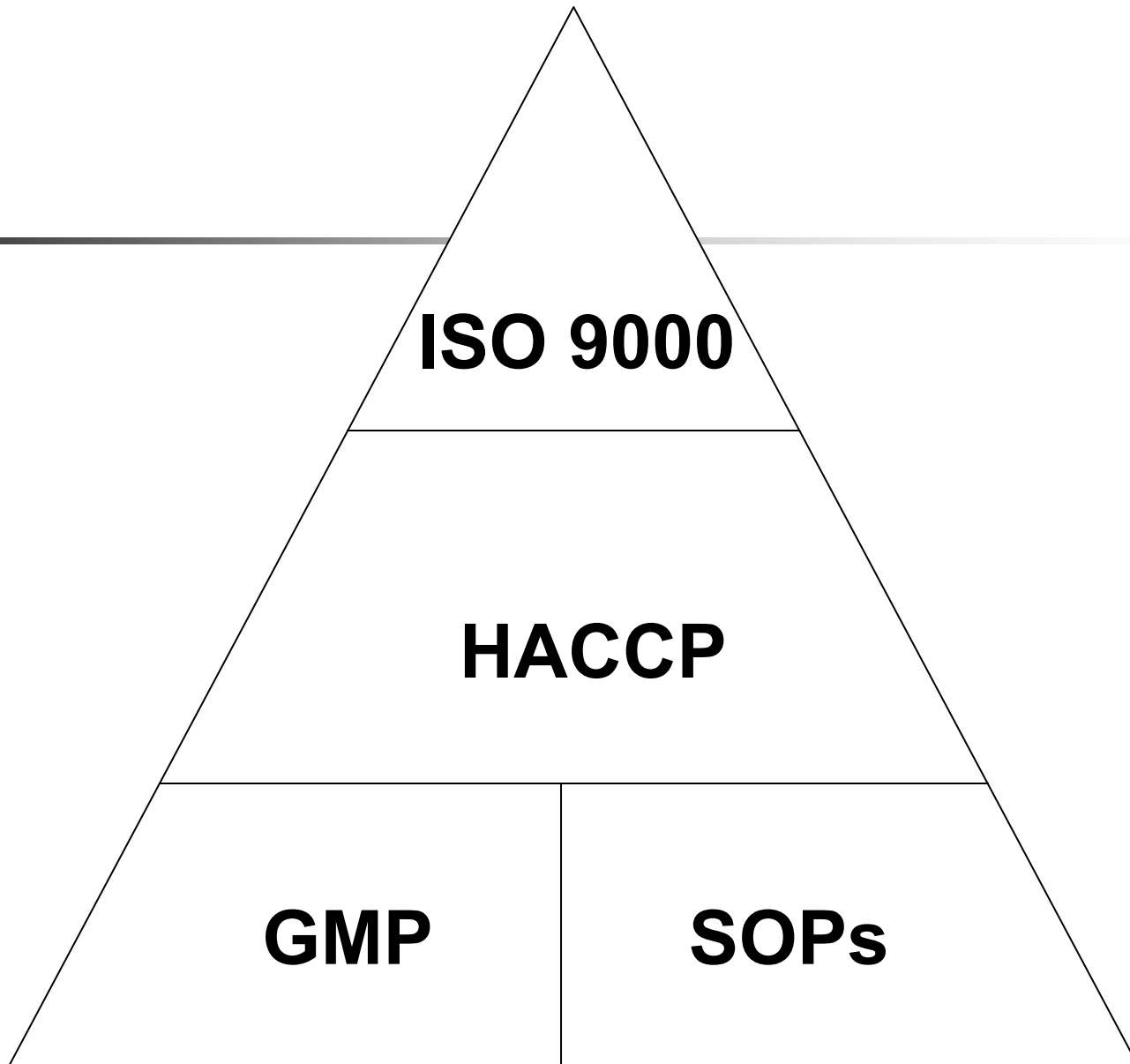




# Physical Material Prerequisite Programs in Small and Very Small Plants

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**ISO 9000**

**HACCP**

**GMP**

**SOPs**



# Prerequisite Programs

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- Prerequisite programs will influence the likelihood that a food safety hazard will occur.
- The Hazard Analysis should consider the occurrence and severity of the hazard.



# Small and Very Small Plants are Unique

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- Small number of employees.
  - Observation of equipment and product
  - Close relationship with management/owners
- Few pieces of equipment used in production
- Close to consumer (friends or neighbors)
- May depend more on prerequisite programs



# Examples of Prerequisite Programs

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- Slaughter
- Fabrication
- Processing



# Slaughter

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- Concern
  - BB's or Buckshot in cow and bull slaughter
- A multi step system of identification
  - Visual observation on the slaughter floor
  - Visual observation on the fabrication floor
  - Metal detection of lean trimmings after fabrication.



# Detection on the Slaughter Floor

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- Plant rewards the employee for discovery of BB's
- Plant maintains records of employee findings
- Early detection would also help to identify supplier.



# Cow and Bull

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- Metal Detection of Lean Trimmings
  - Provides a second check in the system
  - Detection of metal that cannot be seen by workers
  - Less able to connect to the supplier
  - Limited to the accuracy of the detector





# Informing Suppliers

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- Plant has assisted with Beef Quality Assurance meetings.
- Producers supported other educational meetings about Physical Contamination in Cows and Bulls.
- Some plants have required producers to be trained in Quality Assurance.
- These actions can reduce the occurrence of Physical Contamination.



# Fabrication

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- Knife Inventory Control
- Equipment Monitoring

# Knife Inventory

- Processor has a knife check out and check in for all employees.
- While this is effective at keeping knives out of product, this program does not provides improvement over time.



# Equipment Monitoring

- Plant had history of equipment breakdown.
- Plant established a SOP for checking equipment.





# Pre-operational SOP

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- Needle tenderizer and mechanical tenderizer will be inspected prior to the start of production by Operational Manager. Inspection will focus on the intactness of the needles or blades. Inspection will be recorded on the SOP Tenderizing Equipment Log.



# Operational SOP

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- Needle tenderizer and mechanical tenderizer will be inspected twice daily (morning and afternoon) during production by the Operations Manager. Inspection will focus on the intactness of the needles or blades. Inspection will be recorded on the SOP Equipment Inspection Log.



# SOP Tenderization Equipment Inspection Log

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Date	Time	Pre- Op.	Op.	Equipment	Accept / Reject	Inspector



# Increased SOP Inspection

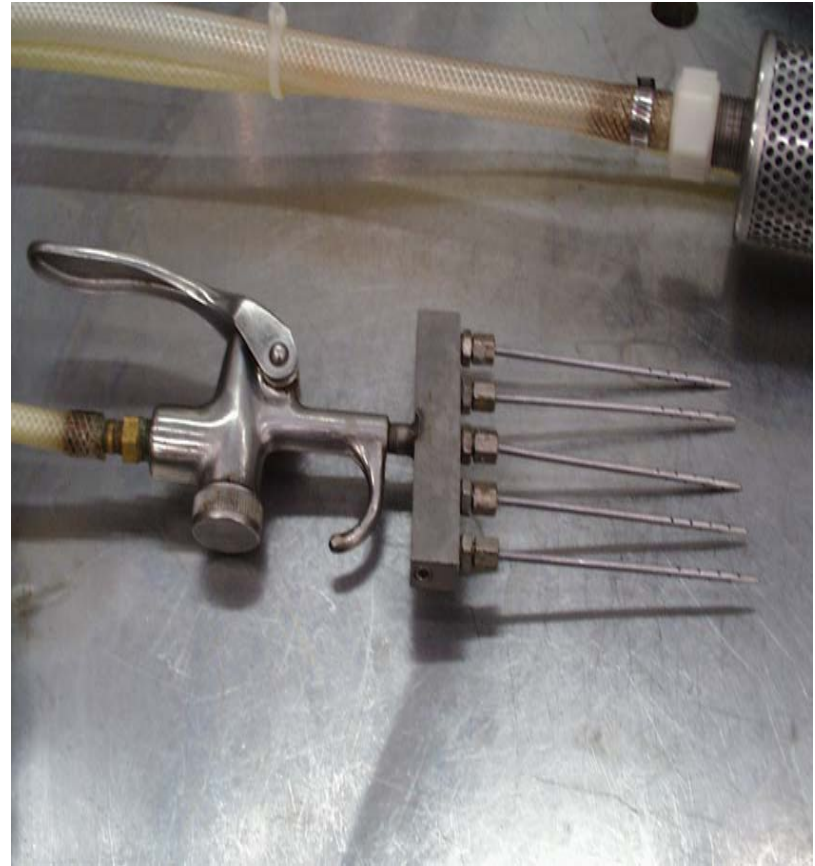
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- Records will establish the dependability or faults of the equipment being used.
- The data collected in the records will allow the plant to make better decisions on monitoring frequency.



# Very Small Processor

- Plant operator set up ham pumping and instructed employee to pump hams.
- After pumping a tip of one needle was missing
- Owner took the hams to local medical facility to x-ray each ham





# Very Small Processor

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- No records were being kept on equipment, however, the plant operator was able to detect a problem.
- Plant operator was truly concerned about his customers.



# Summary

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- Prerequisite programs can work to reduce physical contamination by utilizing many approaches.
- Some prerequisite programs must be ongoing.
- Increased inspection may provide additional information.
- Very Small Processors know their equipment and are concerned about customers.